

## Blood gDNA Extraction from Various Blood Specimen Types using GENTi™ Advanced Blood DNA Extraction Kit

### Experimental Conditions

#### Materials Required

- ♦ GENTi™ Advanced Blood DNA Extraction Kit (903-096A)
- ♦ GENTi™<sup>32</sup> Advanced Automatic Extraction Equipment (GTI032A)
- ♦ Pipette & sterile pipette tips
- ♦ Suitable protector (e.g., lab coat, disposable gloves, goggles, and etc.)
- ♦ FTA card (for dried blood spot, DBS)

#### Sample Information

- ♦ Extraction conditions
  - Sample type and amount

Sample	Amount
Human whole blood	200 µl
Plasma	
Buffy coat	
DBS	2 dots

- Elution volume : 80 ml

#### Sample Preparation

##### • Human whole blood

1. Collect 200 µl of whole blood in EDTA tubes or other anticoagulant mixtures.
2. Observe the manual of GENTi™ Advanced Blood DNA Extraction Kit.

##### • Plasma

1. Centrifuge whole blood at 3,000 x g for 15 minutes at 4°C for blood to be separated into three components : plasma, buffy coat, and erythrocytes.
2. Pipette the plasma on the top layer and transfer it to new tube.
3. Observe the manual of GENTi™ Advanced Blood DNA Extraction Kit.

##### • Buffy coat

1. Centrifuge whole blood at 3,000 x g for 15 minutes at 4°C for blood to be separated into three components : plasma, buffy coat, and erythrocytes.
2. Pipette buffy coat layer, being careful not to disturb the other blood components.
3. Observe the manual of GENTi™ Advanced Blood DNA Extraction Kit.

##### • DBS

1. Drop whole blood onto FTA cards (DBS).
2. Collect two 5 mm diameter DBS samples using sterilized punching machine.
3. Observe the manual of GENTi™ Advanced Blood DNA Extraction Kit.

### Protocol

#### GENTi™ Advanced Blood DNA Extraction's Protocol

\* For more details, [please refer to handbook of GENTi™ Advanced Blood DNA Extraction Kit.](#)

1. Peel off the foil seal from the pre-filled plate/tube.
2. Dispense 15 µl of dissolved Proteinase K to 1st (7th) well.
3. Transfer 200 µl or 2 dots of samples to 1st (7th) well.
4. Load plate on the tray of GENTi™<sup>32</sup> Advanced Automatic Extraction Equipment.
5. Insert magnetic rod cover to the end of strip bracket.

### Result

Sample	No.	Yield (µg)	A <sub>260/280</sub>	A <sub>260/230</sub>
Human whole blood	1	5.31	1.90	1.96
	2	4.54	1.81	1.88
	3	4.49	1.88	1.96
DBS	1	0.17	0.87	0.42
	2	0.17	1.05	0.46
	3	0.18	1.05	0.51
Buffy coat	1	8.33	1.86	2.16
	2	6.57	1.85	2.23
	3	5.75	1.86	2.13
Plasma	1	0.77	1.72	1.27
	2	0.63	1.81	1.53
	3	0.66	1.84	1.44

Figure 1. Result of spectrometer from four samples using GENTi™ Advanced Blood DNA Extraction Kit.

After DNA elutes were extracted from each samples with GENTi™ Advanced Blood DNA Extraction Kit, all DNA elutes were measured in triplicate with spectrometer such as yield, A<sub>260/280</sub>, and A<sub>260/230</sub>.

##### • Spectrophotometer

NanoDrops 2000/2000C spectrometers (Supplier : T)

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## Result

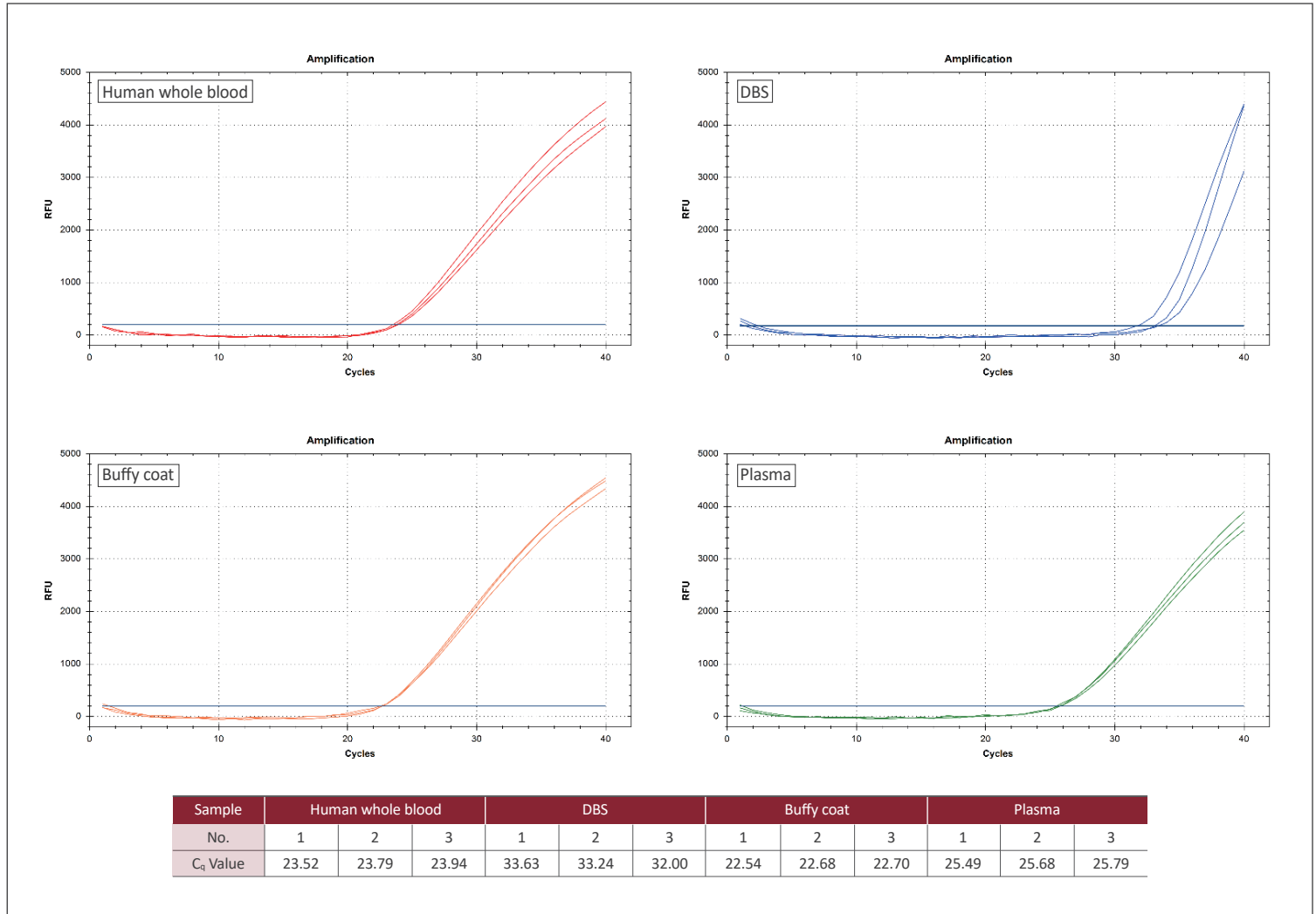


Figure 2. Result of real-time PCR from four samples using GENTi™ Advanced Blood DNA Extraction Kit. After DNA templates were extracted from each samples with GENTi™ Advanced Blood DNA Extraction Kit, all DNA templates were performed in triplicate with real-time PCR methods.

- PCR primer  
Human GAPDH
- Real-time PCR instrument and kit  
Instrument : CFX-96 (1855201, Supplier : B)  
qPCR kit : Probe qPCR Mix (RR391AT)